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10/578,971	03/08/2007	Karsten Strehl	10191/4621	8542

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EXAMINER
LUU, CUONG V

ART UNIT	PAPER NUMBER
2128	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 February 2009</u>.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>11 and 14-19</u> is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>11 and 14-19</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The Examiner would like to thank the Applicant for the well-presented response, which was

useful in the examination. The Examiner appreciates the effort to perform a careful analysis and

make appropriate amendments to the claims.

Claims 11 and 14-19 are pending. Claims 11 and 14-19 have been examined. Claims 11 and

14-19 have been rejected.

Response to Arguments

1. Applicant's arguments with respect to claims 11 and 14-19 have been considered but are

    moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 11 and 14-19 are rejected under 35 U.S.C. 103(a) as being anticipated by the

Applicant's Admitted Prior Art, hereinafter the AAPA, of the instant application 10/578971

in view of Wolff et al. (U.S. Pub. 2005/0022166 A1) and Stewart (Design of Dynamically

Reconfigurable Real-Time Software Using Port-Based Objects, IEEE 1997, 0098-5589/97)

submitted in IDS by the Applicant.

1. As per claim 11, the AAPA teaches a simulation system for computer-implemented simulation and verification of a control system under development, the control system comprising a target hardware and application software running on the target hardware, the simulation system comprising:

    hardware implementing model animation interface passing data from the target hardware to a modeling tool for animating a model of the control system (p. 6 lines 27-31 and Figure 6) and an in-model calibration interface passing data from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture (p. 5 lines 13-34 and page 8 lines 4-11), to communicate with measurement and calibration interface on the target hardware thereby forming a link between the application software on the target hardware and a host of the host-target architecture. (p. 2 lines 16-21, p. 5, lines 17-31, p. 7 lines 16-19 and p. 8 lines 4-14 figure 6).

    However, the AAPA does not teach:

    a generic interface for passing data from the target hardware to a modeling tool for animating a model of the control system and a standard measurement and calibration interface on the target hardware thereby forming a link between the application software on the target hardware and a host of the host-target architecture; and

    a target server adapted to connect the modeling tool with the target hardware, the target server including at least one protocol driver of a communication protocol adapted for communication with the target, the target server configured to translate between the generic model animation interface and the standard measurement and calibration interface.

Wolff teaches using <u>a standard measurement and calibration interface</u> (p. 3 paragraphs 0025).

Stewart teaches a server adapted for the generic components to interface with the target hardware, the server including at least one protocol driver of a communication protocol adapted for communication with the target, the target server configured to translate between the generic model animation interface and other standard interface (p. 761 section 2.4 Reconfiguration Software vs. Generic Software, paragraphs 1-4 and p. 762 section 3.1 The Port-Based Object col. 1 2nd paragraph from bottom. In these paragraphs Stewart teaches a hardware dependent interface components, which are software, to convert generic interface to standard interface. This teaching implies a host or server consisting of the software components to perform this task of conversion. Therefore, it reads onto this limitation).

It would have been obvious to one of ordinary skill in the art to combine the teachings of the AAPA and Wolff. Wolff's teachings would have made the simulation system portable to different platforms (p. 2 paragraph 0020 last 5 lines) and helped generic components to interface with these modules (Stewart, p. 761 section 2.4 Reconfiguration Software vs. Generic Software, paragraph 4).

2. As per claim 14, the AAPA teaches a plurality of simulation processes with corresponding memory and interface modules (p. 2 lines 16-21 and p. 3 lines 30-33),

but does not teach the modules including distinct memory locations adapted for inter-module communication.

Stewart teaches this feature (p. 767, col. 2 of this page, section 4.1 State Variable Communication, paragraphs 1-2 of the section and figure 7).

It would have been obvious to one of ordinary skill in the art to combine the teachings of

the AAPA and Stewart. Stewart's teachings would have maintained the autonomous

execution model while ensuring the integrity of the communication (p. 768 paragraph 1 of

col. 1 of the page).

3. As per claim 15, the AAPA teaches simulation is performed by execution of a control system

    simulation model, the simulation model including a plurality of sub-models being performed

    on one of the plurality of modules respectively (p. 2 lines 16-21).

4. As per claim 16, the AAPA does not teach at least some of the modules are dynamically

    reconfigurable for communication via distinct memory locations.

    However, Stewart teaches this limitation (p. 766 paragraph 4 of col. 2 of this page).

5. As per claim 17, these limitations have already been discussed in claim 11. They are,

    therefore, rejected for the same reasons.

6. As per claim 18, these limitations have already been discussed in claim 11. They are,

    therefore, rejected for the same reasons.

7. As per claim 19, claim 11 inherits these limitations. They are, therefore, rejected for the

    same reasons.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong V. Luu whose telephone number is 571-272-8572. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah, can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. An inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cuong V Luu/

Examiner, Art Unit 2128

/Hugh   Jones/

Primary Examiner, Art Unit 2128